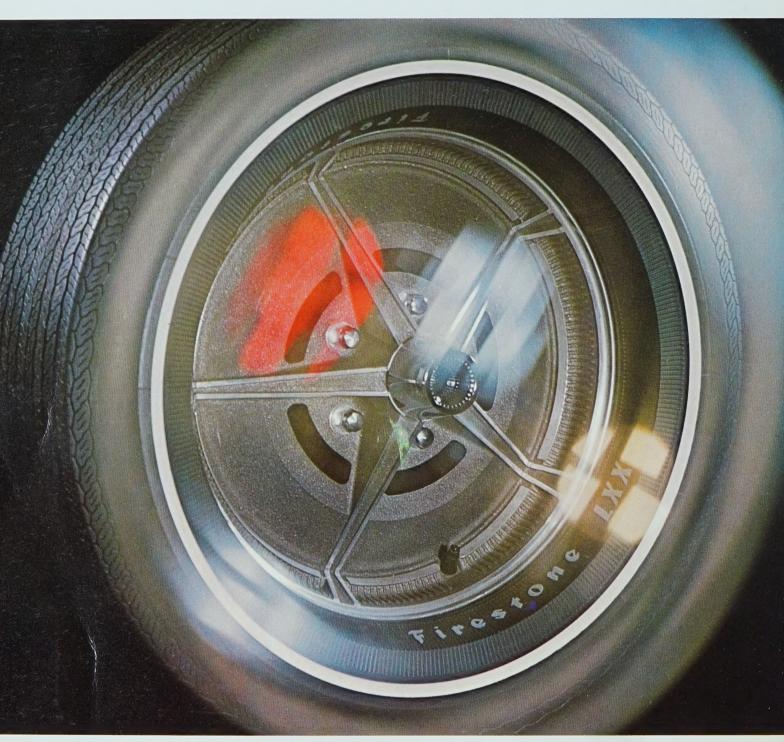
# AR42





The LXX tire rolls into the '70's. Called the greatest tire advance in 25 years, this new tire and wheel concept made its debut in the replacement market during the year.

# The Firestone Tire & Rubber Company 1200 Firestone Parkway, Akron, Ohio 44317

## CONTENTS

1	Financial Highlights
2	Report to Stockholders
4	Consolidated Balance Sheet
6	Consolidated Income Statement, Retained Earnings and Additional Capital
7	Five-Year Trends
8	Ten-Year Financial and Operating Summary
10	Statement of Source and Disposition of Funds, Accountants' Report
11	Directors, Officers, Division Presidents
15	Research
17	Tire Division
23	Diversified Operations
27	International Operations

FINANCIAL HIGHLIGHTS		IAL HIGHLIGHTS	1969	1968
		Net Sales	\$2,278,909,422	\$2,131,443,965
		Net Income	116,685,583	127,034,657
		Per cent to Net Sales	5.1%	6.0%
		Cash Dividends	46,530,484	42,498,594
	ck	Net Income	4.01	4.32
Share	Common Stock	Cash Dividends	1.60	1.45
Per Sh of		Income Tax	3.92	4.07
		Book Value	36.62	34.48
		Working Capital	668,313,606	645,866,575
		Current Ratio, Assets to Liabilities	2.4 to 1	2.6 to 1
		Stockholders' Equity	1,064,138,872	1,010,479,332
-		Wages, Salaries and Employee Benefits	734,173,165	656,669,973
		Depreciation	80,548,944	72,481,659
		Expenditures for Property, Plants and Equipment	165,909,438	199,087,901

Earl B. Hathaway, president, and Raymond C. Firestone, chairman of the board and chief executive officer.

## **Report to Stockholders**

On behalf of the Board of Directors, we present the consolidated statement of our Company and its subsidiaries for the fiscal year ended October 31, 1969.

Another record sales year was achieved as sales reached \$2,278,909,422, an increase of 6.9% over the previous high of \$2,131,443,965 for 1968. This brings the sales gain in the past seven years to over one billion dollars, continuing the Company's pattern of sustained growth.

Net income of \$116,685,583 was the second highest in the history of our Company, exceeded only by the record earnings of \$127,034,657 for 1968. Profits of domestic diversified products divisions and foreign subsidiaries exceeded last year. The high cost of engineering, designing, testing and manufacturing the new bias belted tires, the increase in natural rubber costs which averaged 24% over 1968, and negotiated wage rate escalation combined to reduce our domestic tire profits.

Income per share of Common Stock amounted to \$4.01 for 1969 and \$4.32 last year. Dividends of \$46,530,484 were paid on Common Stock during the year and the amount per share increased to \$1.60 from \$1.45 paid in 1968.

Net income of foreign subsidiaries increased to \$36,159,166, having been \$30,623,507 the previous fiscal year. The consolidated balance sheet includes net assets in foreign countries in the amount of \$274,470,848 on October 31, 1969, also higher than the total of \$259,482,806 on October 31, 1968.

To meet the growing demand for our products both at home and abroad and to prepare for future requirements, capital expenditures of \$165,909,438 were made for new facilities, expansions and quality control equipment. Last year's record expenditures were \$199,087,901. Depreciation increased to \$80,548,944 from \$72,481,659 provided in 1968. Depreciation for financial reporting purposes is computed principally by the straight-line method.

Working capital as of October 31, 1969 was \$668,313,606, increasing from \$645,866,575 on October 31, 1968. Long-term debt of \$4,275,000 was redeemed in 1969 under debenture sinking fund requirements.

Domestic bank loans of \$40,000,000 were drawn down during the year under the terms of a prior credit agreement. These loans together with loans of \$60,000,000 previously outstanding were converted under the loan agreement into term loans repayable in fourteen semi-annual installments through December 31, 1975. The initial installment of \$7,000,000 was paid June 30, 1969. Installments due December 31, 1969, and June 30, 1970, totaling \$14,000,000 are included in long-term debt due within one year.

During the year, \$384,000 of the Euro-Dollar Convertible Debentures were converted into 6,535 shares of the Company's Common Stock. Shares for this purpose were taken from the Company's Treasury Stock. The remaining debentures may be converted into 1,014,740 shares of Common Stock at a conversion price of \$58.75 per share at any time prior to maturity on May 1, 1988.

Taxes totaled \$363,705,811, consisting of income taxes \$113,950,000; excise taxes \$194,988,086; social security taxes \$30,867,811; and property and miscellaneous taxes \$23,899,914.

Wages, salaries and employee benefits totaled \$734,173,165. Employee benefits include pension plans covering the majority of our employees. The cost of these plans for the year was \$29,789,203 including amortization of prior service cost over a period of 30 years. Pension costs accrued are being funded by payments to trustees. The actuarially computed value of vested benefits for the plans, as of the latest valuation date, exceeded the total of the pension funds by approximately \$81,800,000.

Each year the Company provides incentive compensation for executives and other key employees who, in the opinion of the Incentive Compensation Committee, have made important contributions to the efficient and profitable operation of the Company. The amount available for this purpose is contingent on the Company's earnings. Part of this amount is distributed in cash

and part in Common Stock of the Company purchased on the open market. Stock purchase plans, started in 1968, enable employees to invest in Firestone Common Stock through payroll deductions. Stock for this purpose is also obtained by purchases on the open market. Provision for incentive compensation and for the Company's participation in stock purchases by employees resulted in charges to income before tax of \$4,620,000 in 1969.

A total of 521,049 shares of Common Stock were reserved for outstanding options on November 1, 1968, and 414,868 shares were reserved for granting additional options under the 1960 Employees' Incentive Stock Option Plan approved by the Stockholders on January 16, 1960. During the year ended October 31, 1969, options for 102,900 shares were granted at \$47.25 per share and options for 151,636 shares were exercised at an average price of \$39.15 per share. Options for 9,580 shares were cancelled. On October 31, 1969, 462,733 shares were reserved for outstanding options and 321,548 shares were reserved for granting additional options which can be granted until December 31, 1969 when the plan terminates. The purpose of the Plan was to secure for the Company and its Stockholders the benefits of the incentive inherent in Common Stock ownership by key employees who in the judgment of the Board of Directors would be largely responsible for its future growth and continued success. Your Board of Directors has determined that the Company has benefited substantially from the 1960 Plan and has adopted a new Plan which will be submitted to the Stockholders for their approval at the annual Stockholders meeting on January 17, 1970.

The Board of Directors has recommended to holders of Common Stock that the Articles of Incorporation be amended to increase the authorized number of shares of Common Stock from 36,000,000 to 60,000,000, and to substitute for the presently authorized 150,000 shares of Preferred Stock (Cumulative) with a par value of \$100 per share, 10,000,000 shares of voting Serial Preferred Stock having a par value of \$1.00 per share. The proposed increase in the authorized shares of Common Stock will, if approved, provide additional shares which may be used for future growth and development of the Company, and for the conversion of any shares of the proposed Serial Preferred Stock which are made convertible by the Board of Directors and any other convertible securities which may be issued in the future. The proposed amendment will be submitted to holders of shares of Common Stock of the Company on January 17, 1970.

In December, 1968, Firestone Finanz AG, a Swiss finance company, was established in Zurich, Switzerland. This new whollyowned subsidiary coordinates Firestone's international financial and banking operations and provides direct access to the money and capital markets of Europe and the United Kingdom. Firestone Common Stock was listed on November 3, 1969 on the London Stock Exchange to meet the growing investor interest in our stock in the United Kingdom and the European investment market.

The 1969 fiscal year was another period of excellent growth in every area of our business. We developed and introduced a new bias belted tire concept for the original equipment and replacement markets. This important advance over the polyester-fiberglass tire features body plies of rayon with two belts of high modulus rayon encircling the entire body under the tread. This innovation in tire construction was developed from our many years of experience in manufacturing, for the European market, radial tires which feature rayon cord body plies and rayon belts. This newer tire provides all the long wear qualities of the polyester-fiberglass belted tire and in addition offers motorists the benefits of a smoother ride and less vibration.

The Company's research and development activities were broadened to insure our position in the forefront of the industry; investments in new plants, equipment and modernization were the second highest in our history; and many new products were introduced.

In the United States, a new tire plant for our Dayton Tire & Rubber Company division was started in Oklahoma City, Oklahoma. This plant with an initial daily capacity of 17,000 passenger car and front tractor tires will be one of the most modern tire manufacturing facilities in the world. The Firestone Synthetic

Rubber and Latex Company started a major expansion program to increase the division's capacity to 435,000 long tons a year. Expansion projects were also undertaken at other tire plants and in plastics, textiles and metals operations.

In Canada, we opened a new seat belt and shoulder harness plant in Penetanguishene, Ontario. Expansions are under way at the Joliette, Quebec, and Calgary, Alberta, tire and tube plants.

Overseas, we signed an agreement with the Government of Kenya to build a tire plant in Nairobi. Construction of the new plant began during the year.

The new tire plant at Boras, Sweden, was opened and expansion programs were undertaken at Brentford and Wrexham, United Kingdom; Alcochete, Portugal; Bethune, France; Bari, Italy; Bangkok, Thailand; Bombay, India; Manila, Republic of the Philippines; Bizerte, Tunisia; Buenos Aires, Argentina; Sao Paulo, Brazil; and Valencia, Venezuela.

In the Company's campaign against air and water pollution, major strides were made in basic research on these problems and in application of controls at many of our manufacturing plants. Substantial appropriations were made for anti-pollution devices and environmental improvement programs.

Our thousands of dedicated employees and dealers are the solid foundation on which our Company continues to grow. To these loyal men and women who develop, produce and sell our products, we express our sincere appreciation for their contributions in 1969.

It is with deep regret that we report the death on December 12, 1968, of Louis J. Campbell, a member of the Board of Directors and vice president, diversified products. He had served the Company effectively for 26 years and had been a member of the board for three years. Richard A. Riley was elected a vice president on December 31, 1968, succeeding Mr. Campbell.

During the year, Robert W. Koch, vice president, purchases, retired, as did Joseph A. Meek, vice president, personnel and organizational planning. Both men had 44 years of loyal service with the Company. Norman Smith was elected vice president to succeed Mr. Koch; John T. Cahoon was named vice president of personnel and corporate planning; and Joseph V. Cairns became vice president, labor relations. Russell E. Simmons, who had been assistant treasurer, retired; and Robert E. Linder, formerly assistant comptroller, became assistant treasurer. Ian R. MacLeod was elected assistant secretary and Alexander J. McNair and John B. Welsh were appointed assistant comptrollers.

As we enter a new decade we believe our Company is on the threshold of one of the greatest growth periods in our history.

With nearly 110 million cars, trucks, tractors and buses in use in the United States and more than that number abroad, the sales of replacement tires and other Firestone products should reach all-time highs. We are confident that the progress made in all areas of our operations during the past year and the past decade has given us a solid foundation for continued growth in 1970.

Respectfully submitted,

01 - 1 - - - -

Glairman

President

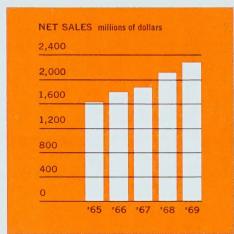
# The Firestone Tire & Rubber Company Consolidated Balance Sheet

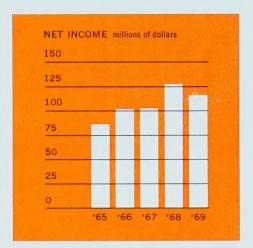
OCTOBER 31, 1969 AND 1968

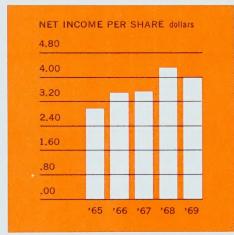
Assets	1969	1968
Current Assets		
Cash	\$ 46,041,139 64,541,307 467,198,552	\$ 56,865,042 23,112,806 489,014,304
Raw Materials and Supplies  In-Process Products  Finished Goods  Total Inventories  Total Current Assets	\$ 140,848,067 44,705,644 377,851,549 \$ 563,405,260 \$1,141,186,258	\$ 119,900,852 39,076,853 328,558,241 \$ 487,535,946 \$1,056,528,098
Other Assets         Funds Held by Trustees for Domestic Plant Construction         Time Deposits for Foreign Projects         Investments, at Cost and Miscellaneous Assets         Prepaid Expenses and Deferred Charges	\$ 9,902,664 60,516,164 30,587,159 12,199,635 \$ 113,205,622	\$ 39,798,386 58,997,591 31,190,288 13,038,876 \$ 143,025,141
Property, Plants and Equipment, at Cost		
Land and Improvements	\$ 43,128,256 292,863,704 1,030,660,769	\$ 38,403,204 267,001,751 927,502,551
Less: Accumulated Depreciation	\$1,366,652,729 601,788,399 764,864,330	\$1,232,907,506 549,815,170 \$ 683,092,336
Total Assets	\$2,019,256,210	\$1,882,645,575

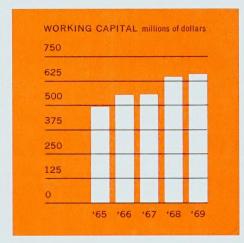
Liabilities	1969	1968
Current Liabilities		
Foreign Bank Loans	\$ 108,685,297 245,194,014 27,434,216 91,559,125 \$ 472,872,652	\$ 80,466,284 219,018,108 5,132,130 106,045,001 \$ 410,661,523
Long-Term Debt		
Debentures, Less Principal Amount Held in Treasury: 1969—\$13,986,000 and 1968—\$9,017,000 25% Due January 1, 1972	\$ 2,677,000	\$ 4,092,000
3½% Due May 1, 1977  4½% Due July 1, 1988  Domestic Bank Loans, 5½%  Industrial Revenue Bonds Due 1970–1992  Foreign Long-Term Loans Due 1970–1990  Euro-Dollar Convertible Debentures, 5% Due May 1, 1988	36,438,000 68,024,000 79,000,000 93,385,000 77,937,679 59,616,000	39,877,000 72,414,000 55,800,000 95,000,000 78,893,198 60,000,000
Early Solidar Convertible September 5/6 Sale may 1, 1500	\$ 417,077,679	\$ 406,076,198
Reserves		
Foreign Investments and Other Risks	\$ 2,700,000 37,700,000 \$ 40,400,000	\$ 2,700,000 29,900,000 \$ 32,600,000
Minority Interest in Subsidiary Companies	\$ 24,767,007	\$ 22,828,522
Stockholders' Equity		
Preferred Stock (Cumulative), Par Value \$100 per Share, Authorized 150,000 Shares, None Issued Common Stock, without Par Value, Authorized 36,000,000 Shares (784,281 Shares reserved for employees' options and 1,014,740 Shares reserved for conversion of debentures):		
Shares Issued: 1969—29,674,101 and 1968—29,522,465	\$ 61,821,044 183,161,923 853,424,550	\$ 61,505,135 177,540;817 783,269,451
Total	\$1,098,407,517 34,268,645	\$1,022,315,403 11,836,071
Total Stockholders' Equity	\$1,064,138,872	\$1,010,479,332
Total Liabilities and Stockholders' Equity	\$2,019,256,210	\$1,882,645,575

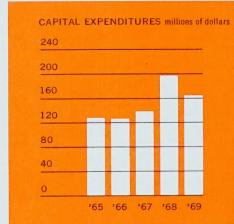


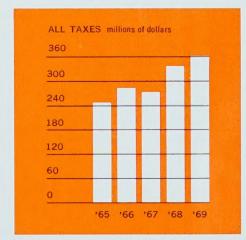












## **Ten-Year Financial and Operating Summary**

DOLLARS IN THOUSANDS	1969	1968	1967	1966
SALES AND EARNINGS				
Net Sales	\$2,278,909	\$2,131,444	\$1,875,376	\$1,814,592
Net Income	\$ 116,686	\$ 127,035	\$ 102,349	\$ 101,765
Per Cent to Net Sales	5.1%	6.0%	5.5%	5.6%
Retained Earnings	\$ 70,156	\$ 84,536	\$ 61,910	\$ 64,336
Wages, Salaries and Employee Benefits	\$ 734,173	\$ 656,670	\$ 544,831	\$ 530,880
Taxes	\$ 363,706	\$ 339,162	\$ 275,231	\$ 283,413
Depreciation	\$ 80,549	\$ 72,482	\$ 66,645	\$ 62,025
COMMON STOCK Stockholders' Equity	\$1,064,139	\$1,010,479	\$ 915,281	\$ 849,242
Stockholders' Equity	\$1,064,139	\$1,010,479	\$ 915,281	\$ 849,242
Cash Dividends	\$ 46,530	\$ 42,499	\$ 40,439	\$ 37,429
Per Share				
Net Income*	\$4.01	\$4.32	\$3.53	\$3.52
Dividends—Cash	\$1.60	\$1.45	\$1.40	\$1.30
—Stock	_	_	_	_
Income Tax*	\$3.92	\$4.07	\$2.94	\$2.85
Book Value	\$36.62	\$34.48	\$31.55	\$29.40
Shares Outstanding	29,058,867	29,304,848	29,007,876	28,884,400
Number of Stockholders	35,402	34,218	27,168	28,236
FINANCIAL POSITION				
Total Assets	\$2,019,256	\$1,882,646	\$1,550,402	\$1,416,740
Working Capital	\$ 668,314	\$ 645,867	\$ 558,387	\$ 553,108
Current Ratio, Assets to Liabilities	2.4 to 1	2.6 to 1	2.6 to 1	2.7 to 1
Property, Plants and Equipment				
Net Value at Year End	\$ 764,864	\$ 683,092	\$ 559,739	\$ 488,029
Additions During Year	\$ 165,909	\$ 199,088	\$ 139,945	\$ 124,652
Long-Term Debt	\$ 417,078	\$ 406,076	\$ 237,246	\$ 202,777

<sup>\*</sup>Based on Average Number of Shares Outstanding Adjusted for Stock Dividends.

1965	1964	1963	1962	1961	1960
\$1,609,756	\$1,448,830	\$1,382,049	\$1,277,691	\$1,182,695	\$1,207,247
\$ 86,667	\$ 79,030	\$ 63,384	\$ 60,034	\$ 63,629	\$ 65,029
5.4%	5.5%	4.6%	4.7%	5.4%	5.4%
\$ 52,191	\$ 47,469	\$ 35,303	\$ 32,503	\$ 36,646	\$ 38,581
\$ 471,858	\$ 417,179	\$ 400,984	\$ 369,434	\$ 329,479	\$ 338,996
\$ 245,527	\$ 232,585	\$ 213,441	\$ 198,619	\$ 169,486	\$ 156,124
\$ 54,960	\$ 54,207	\$ 52,452	\$ 50,271	\$ 49,067	\$ 45,729
\$ 782,658	\$ 728,094	\$ 678,885	\$ 643,292	\$ 610,195	\$ 572,773
\$ 34,475	\$ 31,560	\$ 28,080	\$ 27,531	\$ 26,983	\$ 26,421
\$3.01	\$2.75	\$2.21	\$2.09	\$2.22	\$2.27
\$1.20	\$1.10	\$1.00	\$1.00	\$1.00	\$1.00
		2%	2%	2%	2%
\$2.36	\$2.56	\$2.43	\$2.23	\$2.20	\$2.28
\$27.16	\$25.33	\$23.66	\$22.43	\$21.29	\$20.01
28,817,237	28,743,293	28,688,907	28,117,506	27,548,361	26,976,405
28,300	28,631	28,630	26,446	24,202	20,396
\$1,259,975	\$1,111,658	\$1,000,284	\$ 930,964	\$ 879,534	\$ 840,444
\$ 498,779	\$ 498,891	\$ 468,914	\$ 392,191	\$ 383,731	\$ 380,643
2.7 to 1	3.2 to 1	3.9 to 1	2.9 to 1	3.1 to 1	3.2 to 1
\$ 429,015	\$ 360,735	\$ 344,289	\$ 302,916	\$ 293,202	\$ 273,738
\$ 126,079	\$ 72,261	\$ 94,854	\$ 62,865	\$ 70,870	\$ 82,811
\$ 156,586	\$ 143,255	\$ 143,213	\$ 72,310	\$ 75,985	\$ 76,900

## Statement of Source and Disposition of Funds

FOR THE YEARS ENDED OCTOBER 31, 1969 AND 1968	1969	1968
Source of Funds		
Operations		
Net Income	\$116,685,583	\$127,034,65
Depreciation	80,548,944	72,481,65
Deferred Income Tax	7,800,000	7,100,00
Total from Operations	\$205,034,527	\$206,616,31
Long-Term Debt	11,001,481	168,830,17
Trustees of Funds for Domestic Plant Construction	29,895,722	
Exchange of Common Stock for Assets of Hamill Manufacturing Co., Inc.	_	18,130,58
Sale of Common Stock Under the Incentive Stock Option Plan	5,937,015	4,367,97
Minority Interest in Subsidiary Companies	1,938,485	8,637,02
Other Items	3,512,297	_
Total	\$257,319,527	\$406,582,06
Disposition of Funds		
Payment of Cash Dividends	\$ 46,530,484	\$ 42,498,59
Expenditures for Property, Plants and Equipment	165,909,438	199,087,90
Proceeds from Industrial Revenue Bonds and Euro-Dollar Debentures Deposited with		
Trustees and Foreign Banks	—	64,762,34
Purchase of Treasury Stock	22,432,574	11,836,07
Additional Working Capital	22,447,031	87,479,68
Other Items		917,47
Total	\$257,319,527	\$406,582,06

## Accountants' Report

## LYBRAND, ROSS BROS, & MONTGOMERY

CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Directors and Stockholders,
The Firestone Tire & Rubber Company:

We have examined the consolidated balance sheet of The Firestone Tire & Rubber Company and subsidiary companies as of October 31, 1969 and the related statements of income, retained earnings, additional capital and source and disposition of funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We previously examined and reported on the consolidated financial statements of

the Company and subsidiaries for the year ended October 31, 1968.

In our opinion, the above-mentioned consolidated financial statements, together with the related information contained in the company's Report to Stockholders, present fairly the consolidated financial position of The Firestone Tire & Rubber Company and subsidiary companies at October 31, 1969 and 1968, and the consolidated results of their operations and the source and disposition of funds for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Lybraud, Les Bras. Meurgamery

Cleveland, Ohio, December 16, 1969

#### **DIRECTORS**

Raymond C. Firestone, Chairman
Earl B. Hathaway
Robert D. Thomas
Robert P. Beasley
Elton H. Schulenberg
Leonard K. Firestone
Roger S. Firestone
George F. Karch
John F. Floberg
Herbert H. Wiedenmann
Harvey S. Firestone, Jr., Honorary Director

#### **OFFICERS**

Raymond C. Firestone, Chairman and
Chief Executive Officer
Earl B. Hathaway, President
Robert D. Thomas, Executive Vice President
Robert P. Beasley, Executive Vice President
John T. Cahoon, Vice President
Joseph V. Cairns, Vice President
Edward F. Carter, Vice President
Mario A. DiFederico, Vice President

John F. Floberg, Vice President,
Secretary and General Counsel
George D. Hitler, Vice President
Richard A. Riley, Vice President
Norman Smith, Vice President
Arthur N. Stuart, Vice President
Herbert H. Wiedenmann, Vice President
Elden H. Eaton, Treasurer
John G. Stoneburner, Comptroller
Robert E. Linder, Assistant Treasurer
Reid J. Montgomery, Assistant Treasurer
Kenneth W. Reese, Assistant Treasurer
Stanley M. Clark, Assistant Secretary
Henry L. Houst, Assistant Secretary

Ian R. MacLeod, Assistant Secretary
Harold J. Brandenburg, Assistant
Comptroller
Richard C. Clevenger, Assistant Comptroller
Alexander J. McNair, Assistant Comptroller
John K. Smucker, Assistant Comptroller
John B. Welsh, Assistant Comptroller

#### **DIVISION PRESIDENTS**

William J. Boyd
Xylos Rubber Company
James L. Cumming
The Seiberling Tire & Rubber Company
Mario A. DiFederico
Firestone International Company
Leonard K. Firestone
Firestone Tire & Rubber Company
of California

Frank A. LePage
Firestone Steel Products Company
Arvid G. Lund
Firestone Natural Rubber & Latex
Company
Edward J. Mara, Jr.
Firestone Coated Fabrics Company
Robert W. Rice
Firestone Synthetic Fibers and Textiles

Firestone Plastics Company

Charles W. Rippey
Firestone Industrial Rubber Products
Company
Thomas E. Salisbury
Firestone Synthetic Rubber & Latex
Company
James R. Thomas
The Dayton Tire & Rubber Company
William A. Voorhees
Electric Wheel Company
Don L. Weihe
Hamill Manufacturing Company

#### TRANSFER AGENTS

Roger S. Firestone

First National City Bank, New York The Firestone Tire & Rubber Company, Akron

#### **REGISTRARS**

Company

Bankers Trust Company, New York The Firestone Bank, Akron

#### **AUDITORS**

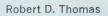
Lybrand, Ross Bros. & Montgomery



Raymond C. Firestone, Chairman



Earl B. Hathaway, President







Robert P. Beasley





## Research

The Firestone central research laboratories developed several highly sophisticated instruments, which will be beneficial to both research and production operations, and it also made important advancements to combat air and water pollution.

One of the developments was a system to computerize the tire curing operation. This system, now being installed in Company tire plants, utilizes sensors, which measure the temperature in the tire mold and in the curing steam. A miniature computer determines the exact curing time based on the various temperature factors and then is able to stop the curing action at the ideal point. This development results in a reduced time cycle, while also providing greater quality control.

Central research also developed the SCEF Tester, which quickly predicts the resistance of textile cords to flexing stresses imposed in tires. It is able to test for Shear, Compression, Elongation and Fatigue, the initials of which make up the tester's name. Both the tire and textile industries have expressed interest in this new device, and this unit will be offered for commercial sale.

Another electronic advance, the Firestone Computer/Optimizer, introduced last year, is now being marketed. It was developed basically to determine the best mix of ingredients for rubber, but it also can be used to formulate products such as paint, textiles, fertilizers, chemicals, pharmaceuticals, foods and a host of others.

This instrument greatly reduces the need for a large number of experiments and results in lower research expenses, while at the same time providing speedy solutions. It can analyze simultaneously the effects of up to five ingredients, single or in combination, on eight different physical properties. It also can analyze the costs of the various materials in relation to the desired end product.

In its continuing effort to battle pollution, the Company developed a new and more efficient flocculant for use in sewage treatment processes. It is based on a chemical derivative of synthetic rubber. This new product is extremely efficient in coagulating microscopic particles, which then can be easily screened out of sewage and industrial treatment plants.

In a joint effort with the U. S. Department of the Interior's Bureau of Mines, the research laboratories developed a process for disposal of discarded tires, while at the same time recovering from them quantities of oil, gas and tar for recycling into manufacturing processes. The Bureau of Mines has determined that the process now is technically feasible, but further work must be done to determine if it can be considered economically feasible.

Under this process, shredded tires are fed into a closed reactor where extreme temperatures break down the various chemical compounds for reuse.

The ultimate goal would be to have these reclaim facilities set up all over the country. Such a network would eliminate the piles of scrap tires and would make unnecessary open-pit burning of tires.

The revolutionary new plastic resin, FCR 1261, developed and introduced last year, has excited great interest among companies in many industries. More than 1,500 companies have expressed interest in its use in their products. Progression from the pilot plant stage to actual production now is under way.

Among the outstanding properties of FCR 1261 are its chemical resistance, high heat-distortion resistance, excellent electrical properties and low moisture absorption. Its versatility is further accentuated through its ability to be cured rapidly to a high degree of hardness, or to be made very soft and flexible.



Research physicists can now study the behavior of a tire in motion by use of a unique device which picks up heat energy rays from the tire and translates them into temperature readings. First of its kind in the industry, the scanning radiation pyrometer provides more complete heat information on moving tires or other objects than ever before possible.

## Tire Division

The year's most important advance in the fast-moving tire industry was the development by Firestone of a "second generation" bias belted tire of all-rayon construction. The new DeLuxe Champion has started to replace the polyester-fiberglass tire on some new 1970 model cars.

This tire features body plies of rayon with two belts of a new high-strength low-stretch rayon encircling the tire body under the tread. It provides the strength and the long-wear characteristics of a polyester-fiberglass tire, which Firestone also continues to build, but with the additional benefit of a smoother ride with less vibration.

Deliveries of this newer tire to the Ford Motor Company started in October and other auto companies are expected to adopt it during the 1970 model year. Some of the other tire companies are following Firestone's lead.

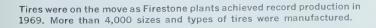
The new concept of the LXX tire, which the Company introduced in 1968, was broadened to include aircraft and race car tires. LXX aircraft tires are being tested for use on Boeing's new 737 jet; and the LXX race tires were highly successful in auto races where the width of the rim was limited. The cantilevered design of the tire made it possible for car owners to abide by the rim width specifications, while still having a wider tire.

The LXX passenger car tire went into production for the replacement market, as did the Supreme Radial Wide Oval, the new premium tire. This tire combines "two tire worlds", the radial and the wide oval concept. It is produced with two radial body plies of rayon, in which the cords run directly from bead to bead, and with four rayon tread stabilizer plies, in which cords run at angles. The tire also incorporates the wide oval concept introduced to the tire industry by Firestone several years ago.

To meet future requirements of the trucking industry, a new family of truck tires has been developed with a wider, oval profile. It has been designated as the "80" series, meaning it is 80 per cent as high as it is wide. The tires are about the same in diameter as today's truck tires, but have a wider cross section. The new truck tires have increased load capacity and improved traction, stability and highway speed capabilities. Increased wheel diameter, which is a part of this total program, also allows for additional braking safety.

Another special off-the-road truck tire was designed for use on a fleet of the world's largest trucks—240 ton capacity coal haulers—being used in rugged mining country.

Also introduced were a Transport 500 Wide Oval light truck





Moving on to a high-speed wheel, a Wide Oval 60 tire goes through a series of mileage and endurance tests in the indoor test laboratory.

The tire division continued to stress high quality, increased capacity and improved distribution in its 1969 operations.

Industry tire shipments are expected to reach 211 million units during the year, a three per cent increase over 1968. Forecasts for 1970 indicate a similar increase over the current year.

As the demand for Firestone tires increased and manufacturing techniques for belted and other new types of tires became more complex, the tire division met its commitments with higher production and improved engineering methods.

Major additions are under way at plants in Albany, Georgia, and Decatur, Illinois. Capacity at Albany will be increased from 17,000 to 26,000 passenger car tires per day. Production facilities for radial passenger tires will be expanded at Decatur and production methods streamlined.

Other modernization programs were completed at plants in Akron, Ohio; Memphis, Tennessee; Des Moines, Iowa; Los Angeles, California; and Pottstown, Pennsylvania.

An innovation in the tire industry, the Production Control and

Communications System was introduced at the Albany plant. The system electronically detects status and productivity throughout the manufacturing process. It also incorporates a plant-wide communications network, which helps alleviate downtime on equipment and provides a high degree of efficiency in the production operations.

Firestone's quality programs, which include 232 separate production checks, were even further improved to insure the safety and uniformity of the products supplied to the motoring public.

A modern quality assurance laboratory, equipped with the latest testing and analysis machinery, has been established in each tire plant. Tests include X-ray examination of the tire body, tread and sidewall; and endurance tests on road wheel machines, which run the tires under heavy loads at speeds up to 125 mph.

The quality assurance program includes pre-production evaluation of new tire designs; analysis of tires as they come off the production lines; and actual in-service checks on private cars and commercial fleets. These tests assure customers that Firestone tires meet, or exceed, our high quality standards.

During the year, the commercial passenger car testing program was expanded to a quarter billion tire test miles annually, which



X-ray machines are part of the standard equipment used in the quality assurance laboratories. Above, the tread area of a tire can be seen on the X-ray screen.



All tire plants have quality laboratories equipped with high speed test wheels. Tires are tested under heavy loads at speeds up to  $125\,$  mph.

is more than double its former operation. Tires on nearly 1,000 commercial and private automobiles are evaluated in actual service. This is in addition to the tests made in the indoor laboratories and at the Company's Ft. Stockton, Texas, track.

The Zero Defects program, started in 1965, continues to be an effective motivational program. It is designed to stimulate employees to work to their highest quality levels and to reduce waste and inefficiency in their jobs.

During the year, Firestone intensified its long-standing concern for maintaining clean air and water. Significant strides were made in the environmental control programs, both inside and outside manufacturing plants. These included installation of new air ventilation systems within the plants and the introduction of several air and water pollution-prevention methods.

Firestone race tires continued their winning ways at tracks around the world, including the most famous race of all—the Indianapolis 500—won by Mario Andretti.

The Company also entered another form of auto competition, with the introduction of a line of drag racing tires, which almost immediately became the most demanded drag tire on the market.

Art Arfons, who set the world's land speed record on three

different occasions on Firestone tires, re-wrote the drag racing record books as he drove his Firestone-equipped, jet-powered dragsters in competition throughout the nation.

MARKETING—A strong sales organization and the introduction of new marketing concepts contributed to Firestone's sales record in fiscal 1969.

A new type of retail operation, called the "tire concept" stores, was initiated during the year. These outlets place special emphasis on high performance tires, service, batteries, custom wheels and other types of auto accessories and provide additional distribution facilities.

Another new approach in merchandising is the Firestone Truck Tire Center. Seventeen of these specialized centers have been established throughout the country and are concentrating their efforts on sales and service to commercial truck tire accounts. Equipped to offer customers fast, efficient service, the centers have proved highly successful in increasing Firestone's share of the market; and plans are being made to expand this program into other large metropolitan areas.



New production control and communications system at the Albany, Georgia, tire plant keeps tabs on productivity throughout the plant. The new electronic system is an innovation in the tire industry.

# soda bottle in vour lane.

You're driving the Santa Monica Freeway at 70 mph and there's a smashed



A new advertising campaign marked the introduction of the LXX tire into the California market.



Firestone, a leader in the sale of tires to large equipment manufacturers, supplied giant Rock Grip heavy duty tires for this U.S. Navy Launcher-Retriever. This unusual machine can launch a 23-ton LCM landing craft, or retrieve it from the water to the beach, even in an eight foot surf.

Many products were introduced in the replacement market including the new top of the line Supreme Radial Wide Oval tire; the "404" passenger car tire, a 78 series tire made with four plies of extra-strength rayon cord in the body; the Town & Country 78 series; and the Deep Tread rear tractor tire, the largest tire ever produced for farm equipment. Nearly six feet in diameter, the giant tire was designed for the newer high horsepower tractors now in use on many farms throughout the country.

In response to the growing needs for skilled retail store personnel, the Company tapped a major source of manpower during the year as it joined the Transition program. This program, operated by the Defense Department in cooperation with industries, offers job counseling and vocational training to military men awaiting separation from the service.

Firestone's training program was established at five military bases during the year: Ft. Knox, Kentucky; Ft. Benning, Georgia; Ft. Carson, Colorado; Ft. Lewis, Washington; Ft. Bragg, North Carolina, and hundreds of men have enrolled in the classes. Two programs-retail selling and office and credit operations-are offered to the servicemen interested in future careers in the retail tire business. Plans to expand operations to other military bases are under consideration.

As a supplier of many private brand tires, Firestone showed substantial growth in this important segment of the tire market.

Fidesta, Firestone's leased tire and auto supply division, with headquarters in Columbus, Ohio, operates tire and auto supply departments in many leading department stores throughout the country. This channel for replacement tire sales continues to grow as department stores expand into shopping centers and offer complete tire service centers as a convenience to their customers.

Tire sales to the automotive industry were at high levels during the year. As a supplier to all major automobile, truck, farm and earthmoving equipment manufacturers, Firestone introduced many new sizes and types of tires to meet the industry's specific needs.

During the year, the Company announced that the J. Walter Thompson Company would assume all advertising programs for tires and diversified products. The agency had previously handled advertising for some international subsidiaries. The agency is creating new campaigns reaching millions of people on radio and television and in newspapers, national magazines, trade journals, catalogs and direct mail.

A new multi-million dollar plant is nearing completion in Oklahoma City, Oklahoma, for The Dayton Tire & Rubber Company. This is the division's first plant outside its headquarters city of Dayton. Ohio,

The plant is scheduled to begin production late in 1969, and will have an initial daily capacity of 17,000 passenger car and front tractor tires.

A growing demand for Dayton brand tires, and other private brand tires which the company manufactures, made the additional facilities necessary.

Since Dayton became a Firestone division, many expansion programs have been completed at the Ohio plant. The latest programs completed this past year provided for increased production of belted passenger car tires and truck tires, and a modernization and expansion of rubber compounding facilities.

Eleven new passenger and truck tires were introduced during 1969, including the new Daytona Radial tire and the Daytona 4+2, a bias belted tire.

Continued emphasis on quality, combined with an aggressive marketing program, resulted in increased acceptance for the

Dayton brand tire line by motorists, distributors and dealers throughout the country.

At the Seiberling Tire & Rubber Company, activities centered around another extensive factory modernization and expansion project, development of new tire lines and a forceful sales promotion program.

The division's ambitious advertising projects brought increased sales and necessitated an enlargement of production facilities. An expansion program was started during the year and, when completed in early 1970, output will be increased by more than 30 per cent.

Installation of two oil-fired boilers, to replace coal-fired generating equipment, is under way at the Barberton plant. This is another forward step in Seiberling's environmental control program.

New tire designs introduced this year include the Supreme Dynaguard 600, a premium bias belted passenger tire constructed with four plies of polyester and two plies of rayon.

The number of new distributors and customers for the Seiberling tire line, as well as its private brand tires, continued to increase during the year.



The Dayton Tire & Rubber Company's new plant in Oklahoma City, Oklahoma, nears completion.



A. New unit for production of Duradene synthetic rubber went on stream at the Lake Charles, Louisiana, plant.

B. Sparks fly during a welding operation at the Electric Wheel Company, which produces wheels and rims for agricultural and construction equipment.

C. Underwater Fabri-Dome tents, designed by the Coated Fabrics division, are being used to help control oil seepage from wells off the California coast.

D. Furniture and wall paneling covered with Velon rigid film are among the newest consumer uses for the versatile Firestone plastic.



## **Diversified Operations**

Firestone's diversified operations, which account for approximately 40 per cent of the Company's sales, experienced new growth in the 1969 fiscal year and even higher levels of activity are expected in 1970. These divisions manufacture and market more than 44,000 products in plastics, metals, synthetic and natural rubbers, textiles and chemicals.

Plant expansions highlighted the year for all the divisions, and one of the major expansions was at the Firestone Synthetic Rubber & Latex Company. These projects in Akron, Ohio; Orange, Texas; Lake Charles, Louisiana; and Port Jerome, France, will increase the division's manufacturing capability by approximately 30 per cent when completed.

At Lake Charles, a new unit for production of Duradene, a stereo synthetic rubber, went on stream, and another new unit will be finished early next year. Duradene, a Firestone development, is used extensively in tires to improve traction and increase resistance to tread cracking. There was also a major expansion of facilities at the Orange plant to increase production of Diene, a polybutadiene synthetic rubber.

The division makes a complete range of synthetic rubbers, from those tough enough to withstand the grinding abuse required in tires, to a completely pure product used by the makers of chewing gum.

A rapidly growing use for both synthetic and natural latex is in the carpet industry, which uses Firestone latexes to lock in the tufts of fiber and for the durable, but resilient, foam cushion applied to the back of the carpeting, or for use as a separate pad.

An interesting new development is the use of FR-N, nitrile synthetic rubber, by a shoe manufacturer for shoes to meet U. S. Navy specifications for aircraft carrier service. The carrier decks are coated with an abrasive, which causes rapid wear to conventional soles. The tough soles made with FR-N also have great resistance to gasoline and oil.

The Permalastic, Heveatex and Loxite units operated at full capacity during the year producing adhesives and sealants for the automotive, textile and building products industries.

The Electric Wheel Company in Quincy, Illinois, which makes wheels, rims, farm wagons and other metal products, recorded higher sales and anticipates a continually expanding market for its products, which are closely allied with the growing agriculture industry.

The Firestone Steel Products Company continues as the world's largest producer of both truck rims and wheels and stainless steel

containers, and again set new production records in both areas during the year.

The company produced nearly 400,000 bulk containers for the soft drink industry and, in addition, received an order for \$4 million worth of steel beer barrels, which is the largest single barrel order ever placed.

The metal finishing facilities at the Spartanburg, South Carolina, plant were expanded to increase the buffing and painting production capacity for truck grilles and other decorative automotive parts; and at the plant in Wyandotte, Michigan, additional warehouse space for wheels and rims was added.

The division completed several new wheel designs for the LXX tire, and is developing a new truck wheel designed to increase load carrying capacities of medium-size trucks.

Firestone Steel Products of Canada in London, Ontario, completed its first year of operation and expansion into new rim and wheel products is already under way there.

The defense research division continues as a leader in research and development of shaped-charge explosive devices and has received a contract from NASA in Houston for the application of these principles to the development of meteor simulators for hypervelocity impact studies.

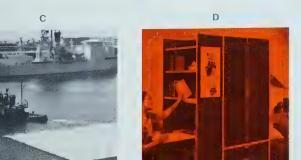
The Ravenna Army Ammunition plant, a shell loading facility operated by Firestone for the Government, was reactivated during the year. Contracts totaling \$44 million have been received for reactivation, modernization and loading of ammunition.

F. A. LePage was named president of the Steel Products division, succeeding R. A. Riley who was elected a vice president of the parent Company.

Production from Firestone Plastics Company plants in Pottstown, Pennsylvania; Perryville, Maryland; and West Caldwell, New Jersey, again broke all records during 1969. Modernization and expansion of facilities were continued to meet the growing demand for Exon vinyl resins, compounds, latexes, and Velon film and sheeting.

The plant at Perryville was in production on newly developed vinyl latexes, one of which has been created for use in automobiles as a saturant-adhesive and for fabric finishing.

Production capacity on Velon rigid film is being expanded substantially to meet the surging demand from customers in the building and furniture industries. The film, which is printed by the customers in natural-looking wood grain patterns, is used on wall panels and for furniture.



The Hamill Manufacturing Company, which was acquired by Firestone in 1967, continues as a leader in the automotive seat belt and shoulder harness industry. Hamill produced a record number of belts and harnesses during the 1969 model year and expects an annual sales growth of eight per cent.

The division acquired a new plant in Penetanguishene, Ontario, and now has three in Canada and eight in Michigan. During the year, a new combination seat belt and shoulder harness assembly was developed for one auto manufacturer's 1970 models, and the unit will be supplied to other car manufacturers for 1971 models.

With the Coated Fabrics division, Hamill is working on development of a Passive Safety Restraint System for vehicles. This automatic system would prevent vehicle occupants from being thrown forward in the event of a collision through the use of an "air bag", which would inflate automatically at a barrier impact speed of eight miles per hour. The restraining device would be inflated within 40 milliseconds and then would automatically deflate in a half second to permit occupants to leave the car.

Hamill's metal plants are also producing decorative trim panels for many household appliances.

Activities of Firestone Synthetic Fibers and Textiles Company were centered on new product developments and increased capacity of fibers, yarn, tire cord fabric and resins.

Because of the increased demand for polyester tire cord, production of this material was substantially expanded. Plants in Gastonia, North Carolina; Bowling Green, Kentucky; and Bennettsville, South Carolina, operated at capacity producing rayon, nylon and polyester cord fabric for the tire industry. An expansion program currently under way at Bowling Green will increase tire cord production by 50 per cent.

In another area, the division introduced a new product—texturized nylon—for the hosiery market. Installation of the new texturizing equipment gives the division additional capabilities in processing not only Nytelle textile nylon, but various other types of fibers for use in the clothing industry.

At the Technical Center in Hopewell, Virginia, projects continue on development of non-flammable resins for use in flame-retardant materials in the building and textiles industries.

The World Bestos Company, in New Castle, Indiana, posted increased sales and introduced a new economy brake block and a superior compound for truck and bus brake linings. A major



Decorative trim parts for appliances are produced by Hamill Manufacturing Company.



Hostess culottes of Nytelle textile yarn are an example of the many uses of this versatile synthetic fabric.

manufacturing improvement resulted from the installation of a new curing system for passenger car brake linings at the plant. This system will increase productivity and quality and lower manufacturing costs.

Firestone received a great deal of favorable reaction for its efforts to help control the oil seepage at the oil drilling area off the coast of Santa Barbara, California. The Firestone Coated Fabrics Company designed and manufactured an underwater "tent city" for one of the major oil companies. The system incorporates the use of giant pyramid-shaped Fabri-Dome tents made of vinyl coated nylon. These tents are positioned over the fissures on the ocean floor to capture seeping oil. The tents are connected by hoses to the pumping platform, where the seepage is introduced into the normal processing operation.

The world's largest Fabridam inflatable gate for controlling water was installed at Sunbury, Pennsylvania, to create a 3,000-acre artificial lake. The Fabridam, an inflated neoprene-coated fabric tube, eight feet high and 2,000 feet long, spans the Susquehanna River. This type of dam is a unique answer in the field of water control and is considered a forerunner of other recreational projects.



A shipment of natural rubber from the Liberian plantations is unloaded at a Great Lakes port.

During the year, Firestone Industrial Rubber Products Company continued its intensive program of product development for the transportation industry and for several scientific projects.

Concerned with fatigue of truck drivers and its relationship to highway safety, the division introduced an air spring truck seat and is in the development stage of using Airmount pneumatic springs to isolate the cabs from the truck to reduce noise and vibration.

For the mass transit market, the division has designed several products including a new type of suspension for both high-speed railway cars and subway cars, and new brake and signal actuators for railway signaling purposes.

Airmount pneumatic springs are also involved in two highly sophisticated scientific projects. One of the projects is FLIP (Floating Laboratory Instrument Platform), a specially designed 355-foot ship, which is conducting acoustical oceanographic studies. While scientists are conducting highly sensitive sound studies of the depth, the sounds and vibrations from the ship's engines and air conditioning equipment are isolated by the Airmount isolators, thereby eliminating false sound findings.

A similar application is being used at Wright Patterson Air Force Base to support and protect from vibration a 360-ton precision optical instrument used to test all sizes of precision photographic lenses for accuracy and clarity.

To keep pace with its growing sales, Industrial Rubber Products has plant expansion programs under way at Newport, Tennessee; Fall River, Massachusetts; Noblesville, Indiana; Corry, Pennsylvania; and Milan, Tennessee.

Consumption of natural rubber throughout the world continued to rise and should reach an estimated 2,850,000 tons this year. The Firestone Natural Rubber & Latex Company continued to develop and expand its operations in order to meet demands for the additional rubber.

Expansions during the year included a new processing facility in Ghana; the addition of a second extruder drying unit in Harbel, Liberia, which makes Firestone the leading producer of quality, extruder-dried rubber; and a latex concentrate plant at Cavalla, Liberia.

A record 120,000,000 pounds of dry rubber and latex concentrate were processed during the year. Of the total, 93,000,000 pounds were produced on plantations in Liberia, Ghana, Brazil and the Philippines, and 27,000,000 pounds were purchased from independent growers.



## **International Operations**

Operations of Firestone International Company were characterized by sharp expansions in all parts of the world in order to keep pace with the foreign tire markets, which are expanding much more rapidly than the domestic market.

Automotive production outside the United States and Canada has increased an average of 12 per cent each year during the past 11 years, or triple the rate of growth in North America. As vehicle registrations in foreign markets continue to increase, new records are achieved by Firestone International.

The division has doubled its unit tire production within the past five years to supply tires for new cars, buses, trucks and farm implements, as well as for the replacement market overseas. Expenditures for new plants, expansions, product development and marketing have enabled the company to keep abreast of the demand for Firestone products in international markets.

#### **Africa and Middle East**

Firestone's activities in Africa continued to expand as nations of this continent made steady social and economic progress.

The Company and the Government of Kenya signed an agreement during the year to build that country's first tire plant in Nairobi, a major step in the country's industrialization program. Construction has begun and production capacity will handle needs for Kenya's automotive market, as well as provide for exports to other countries in the East African Community.

Firestone Ghana Ltd., the tire plant in Bonsaso, was opened in April, and is in production on passenger, truck, bus and tractor tires. Sales and marketing of tires were expanded throughout West Africa.

Firestone Tunisie, opened in 1967, doubled its tire production capacity to supply needs in that area.

### **Europe**

The Company's decision to establish Firestone Europa, S.p.A., administrative, research, development and marketing head-quarters, in Italy reflects the Company's confidence in the steady growth of Western Europe.

It is estimated that by 1977 there will be nearly 113 million vehicles on the roads of Western Europe—nearly double the 1967 figure. The market for original equipment and replacement tires will increase accordingly and Firestone is pursuing these opportunities and is ready to take full advantage of this market's potential.

During the year, Firestone Viskafors AB opened its second

tire plant in Sweden, the 12th tire facility in Europe. The new plant, located in Boras, is producing radial tires exclusively, since this type tire has been readily accepted as the leading tire in international markets. One of the most modern tire plants in Europe, the Boras facility has been designed to include special filters and cleaning devices to provide the best working conditions and to eliminate air pollution in the surrounding areas.

Facilities at Brentford and Wrexham, United Kingdom; Alcochete, Portugal; Bethune, France; and Bari, Italy, are also being enlarged and modernized to increase tire capacity.

#### Asia and South Pacific

Firestone International continues to strengthen and consolidate its position in Asia and the South Pacific.

Major expansions of the facilities in Bangkok, Thailand; Bombay, India; and Manila, Republic of the Philippines, are now in progress and will be completed in early 1970. New marketing programs throughout the area steadily improved Firestone's position there as a leading tire and rubber products manufacturer.



Firestone tires are providing quality service in all parts of the world and on all types of terrain as dramatically depicted by this safari survey car in the Nairobi (Kenya) National Game Preserve.

#### South America

Firestone de la Argentina in Buenos Aires received a contract as major tire supplier to contractors building the El Chocon dam southwest of Buenos Aires. Firestone will supply and service giant tires on earthmoving equipment working on the project. The dam, one of the largest in South America, will provide power for the area and also serve as an irrigation project.

Facilities at the Buenos Aires plant are being expanded to increase production of passenger car tires; and the textile plant at Sao Paulo, Brazil, increased capacity to keep up with tire plant demands for cord fabric. Other tire plant modernization programs were completed in Brazil and Venezuela.

Among new products introduced in foreign markets were the Cavallino Sport 200, a high performance sport type radial tire; the Torino F-7, a bias type passenger tire; and the Transport 1000 steelcord radial truck tire.

Throughout the world most areas demonstrated increasing economic progress and stability with beneficial effects on markets for automotive and rubber products. Firestone plants, sales branches and distributors in 135 countries expanded sales and marketing programs to help increase Firestone's share of the growing, but highly competitive, tire markets.

#### Canada

Solid growth marked the year for Firestone Tire & Rubber Company of Canada Limited. Tire shipments for the rubber industry in Canada will reach an estimated 20 million units this year, as the automotive industry and the Canadian highway system continue to expand. Forecasts indicate a 7.8 per cent increase in tire shipments in 1970 and the Canadian plants continue to prepare for this increased demand.

A multi-million dollar addition now under way at the Joliette, Quebec, plant will increase production there by 50 per cent; at Calgary, Alberta, production was increased 60 per cent; and production of fibers and tire cord fabric was expanded at the synthetic fibers and textiles plant in Woodstock, Ontario, to keep up with demands of the tire plants.

Environmental control systems were installed at the Hamilton, Ontario, plant, and a new distribution center was completed at Hamilton to accommodate the increased tire inventory from the plants, and to provide faster, more efficient service to customers.

In the sales and marketing areas, 14 new stores were opened during the year, bringing the total of retail and wholesale stores in Canada to 136. The company also expanded its advertising program on national television and radio and initiated an outdoor advertising campaign.



- A. Giant Firestone tires equip earthmoving vehicles on a road building project in Brazil.
- B. Modern, attractive service stations are providing additional outlets for Firestone tires throughout Europe.
- C. One of the largest trailers in Europe is used by Firestone Hispania to deliver tires to automotive plants in Spain.

## Firestone Domestic and Foreign Facilities

#### DOMESTIC FACILITIES

ARKANSAS

Magnolia-Coated Fabric Products Russellville-Tubes

CALIFORNIA

Los Angeles-Tires, Industrial Products,

Reclaim Rubber

Salinas-Tires

**GEORGIA** 

Albany—Tires

ILLINOIS

Bloomington-Tires

Decatur—Tires

Quincy-Wheels, Rims, Metal Products

INDIANA

New Castle-Brake Lining

Noblesville-Industrial Products, Air Springs, Defense Products

Des Moines-Tires

KENTUCKY

Bowling Green-Textiles

LOUISIANA

Lake Charles—Synthetic Rubber

MARYLAND

Perryville-Plastic Resins

MASSACHUSETTS

Fall River-Industrial Products, Foam

Rubber, Elastic Thread

Melrose-Adhesives and Sealants,

Latex Compounding

MICHIGAN

Almont, Bad Axe, Imlay City, Romeo, Ubley, Yale and Washington-Seat Belts,

Shoulder Harnesses

Detroit—Adhesives and Sealants

Wyandotte-Wheels, Rims, Metal Products

**NEW JERSEY** 

Trenton—Adhesives and Sealants

West Caldwell-Plastic Products

NORTH CAROLINA

Gastonia-Textiles

Akron-Tires, Adhesives, Latex Compounding, Defense Products, Reclaim Rubber, Synthetic Rubber, Research Laboratory

Barberton-Tires

Columbiana-Tire Proving Ground

Dayton-Tires

\*Ravenna-Army Ammunition Plant

**OKLAHOMA** 

Oklahoma City-Tires

PENNSYI VANIA

Corry-Urethane Foam

Pottstown—Tires and Tubes, Plastic Products, Resins, Synthetic Rubber

SOUTH CAROLINA

Bennettsville-Textiles

Spartanburg-Wheels, Rims, Metal

Products

**TENNESSEE** 

Memphis-Tires, Reclaim Rubber

Milan-Urethane Foam

Newport—Semi-Pneumatic Tires

Fort Stockton-Tire Proving Ground Orange-Synthetic Rubber, Butadiene

Hopewell-Synthetic Fibers, Plastic Resins, Technical Center

#### **FOREIGN FACILITIES**

Buenos Aires-Tires and Tubes, Textiles, Reclaim Rubber

Brisbane-Tires, Industrial Products

Melbourne-Industrial Products

Perth-Tires

Sydney-Tires, Industrial Products, Foam Rubber, Urethane Foam, Plastics

Rio de Janeiro-Tires and Tubes

Sao Paulo-Tires and Tubes, Textiles, Reclaim Rubber

Calgary, Alberta-Tires and Tubes

Hamilton, Ontario-Tires and Tubes

Joliette, Quebec-Tires and Tubes

London, Ontario-Steel Products Midland and Penetanguishene, Ontario-

Seat Belts, Shoulder Harnesses, Metal Products

Woodstock, Ontario-Textiles, Synthetic

COSTA RICA

San Jose-Tires and Tubes

Bethune-Tires and Tubes

Port Jerome—Synthetic Rubber

\*Saint Nabord—Synthetic Fibers

GHANA

Bonsaso-Tires and Tubes

\*Bareilly-Synthetic Rubber, Butadiene,

Styrene

Bombay—Tires and Tubes

ITALY

Bari-Tires and Tubes

\*Osaka-Tires and Tubes

Nairobi-Tires and Tubes

Cavalla-Rubber Purchasing and

Preparation

Harbel-Rubber Purchasing and

Preparation

MALAYSIA

Butterworth-Rubber Purchasing and

Preparation

Kuala Lumpur—Rubber Purchasing and Preparation

MEXICO

\*Mexico City-Tires and Tubes

NEW ZEALAND

Christchurch—Tires and Tubes

NORWAY

\*Askim-Tires and Tubes

**PORTUGAL** 

Alcochete-Tires and Tubes

REPUBLIC OF THE PHILIPPINES

Manila-Tires and Tubes

SINGAPORE

Singapore-Rubber Purchasing and

Preparation

SOUTH AFRICA

Port Elizabeth-Tires and Tubes,

Industrial Products, Reclaim Rubber

\*Bilbao-Tires and Tubes, Textiles, Foam Rubber, Industrial and Metal Products,

Reclaim Rubber \*Burgos—Tires and Tubes

Boras-Tires and Tubes

Tvaaker-Industrial Products

Viskafors—Tires and Tubes, Industrial

Products

**SWITZERLAND** \*PratteIn-Tires and Tubes

THAILAND

Bangkok-Tires and Tubes

**TUNISIA** 

Bizerte-Tires and Tubes

UNITED KINGDOM

Brentford—Tires and Tubes, Industrial

Products

Wrexham-Tires and Tubes

URUGUAY \*Montevideo-Tires and Tubes

VENEZUELA

Valencia—Tires and Tubes

WEST GERMANY

\*Hamburg—Tires and Tubes, Industrial Products, Reclaim Rubber

## **RUBBER PLANTATIONS**

**BRAZIL** 

Itubera **GHANA** 

Bonsaso

**GUATEMALA** 

Retalhuleu-Experimental

Plantation LIBERIA Cavalla

Harbel REPUBLIC OF THE PHILIPPINES

Makilala



YOUR SYMBOL OF QUALITY AND SERVICE

# AR42 Firestone

## **NEWS BRIEFS**

Now reaching the marketplace are five new quality lines of tires which will broaden the company's sales potential. They include the LXX, which has been called by industry observers "the most important tire advance in 25 years"; the Supreme Radial Wide Oval, which combines the features of radial construction with the Wide Oval concept pioneered by Firestone; the original equipment Deluxe Champion Sup-R-Belt, which has two belts encircling the tire under the tread; the Wide Oval Sup-R-Belt, which features the new belted bias construction, and the 404, a replacement tire with four-ply bias construction.

Ghana has taken a major step toward industrialization with the opening by Firestone Ghana Ltd. of the country's first tire plant in Bonsaso. The new facility will be able to produce virtually all of the tires and tubes for the nation's passenger cars, trucks, buses and tractors.

Firestone has donated a multi-million volt neutron generator for cancer research at the Cleveland (Ohio) Clinic. It is the first of its kind in the United States. Experts say this system holds great promise for the eventual control of cancer.

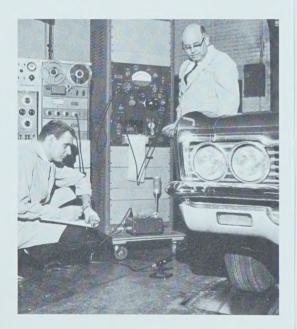


The Firestone Tire & Rubber Company

## INCOME STATEMENT

For the six months ended April 30, 1969

# Curbing Tire Noise



FIRESTONE SCIENTISTS use noise frequency analyzing equipment to measure tire noises under controlled laboratory conditions.

Tire company scientists and engineers have been concerned with tire noise for many years and the low noise level of today's tread designs attests to their accomplishments.

Noise considerations must be compatible with the other important basic factors in a successful tire design such as safety, durability, traction and lateral stability, Firestone scientists point out.

To meet this challenge they use a noise frequency analyzer in their testing and design programs. This device indicates the relative intensity of various parts of the noise spectrum which is produced by any tread design.

It is used to measure tire noise under controlled laboratory conditions and for analyzing tape recordings of outdoor noise tests. The results of this testing have led to many improvements in tread designs of Firestone tires.

Although there is no way to eliminate tire noise completely, Firestone engineers feel they have reduced it to a very satisfactory and acceptable level. Firestone is tapping an almost unlimited source of manpower to fill the growing number of jobs in retail tire outlets.

More than 800,000 men will be discharged by the military services this year, many of them Vietnam veterans, and the vast majority will be entering the job market.

Through a program called Transition, many of these soon-to-be civilians are now getting counseling and vocational training designed to get them jobs when they shed their uniforms.

Transition is only one of several programs ordered by the White House two years ago to assist the increasing number of men being discharged from the military. Operated by the U.S. Defense Department through the education centers at military bases around the country, Transition invites industry to set up training programs at these bases for servicemen who are within six months of being discharged.

The company's Transition program started with the first class this year at the sprawling Ft. Knox, Ky., Army base.

# Making Transition Easier



SALES PRESENTATIONS are part of the classroom work of the Firestone Transition program.

Consolidated Income Statement

# To the Stockholders of THE FIRESTONE TIRE & RUBBER COMPANY

Net sales amounted to \$1,058,670,135 for the six months ended April 30, 1969. This is an increase of 5.7% over last year and establishes a new high for a first six months period.

Net income of \$50,571,733 was the second highest in the history of the Company for the first half of a fiscal year, although 6.7% below the record performance in the same period of 1968.

Net income from domestic diversified products divisions and overseas operations was higher than last year. However, profit from United States tire divisions was reduced by increased raw material and manufacturing costs on new product lines.

Earnings for the six months were equal to \$1.73 per share of common stock this year and \$1.84 per share last year.

	Six Months Ended April 30		
	1969	1968	
NET SALES	\$1,058,670,135	\$1,001,117,472	
Other Income	9,513,319	5,313,644	
	\$1,068,183,454	\$1,006,431,116	
Less: Cost of Goods Sold, Depreciation, Selling, Administrative and General Expenses and Interest	\$ 965,211,721	\$ 894,540,652	
Domestic and Foreign Taxes on Income	52,400,000	57,700,000	
	\$1,017,611,721	\$ 952,240,652	
NET INCOME	\$ 50,571,733	\$ 54,190,464	
PER SHARE OF COMMON STOCK	\$ 1.73	\$ 1.84	

Tarl B. Harlaway

Chairman

Subject to year end audit